

REMARKS

This amendment is in response to the first Office action (Paper No. 20060215) mailed February 23, 2006. Upon entry of this amendment, claims 34 through 53 will be pending. Applicant has newly added claims 47 through 53 by this amendment.

Election/Restrictions

In Paper No. 20060215, the Examiner stated, "Claims 39-46 have been withdrawn from further consideration pursuant to 37 CFR 1.142 (b), as being drawn to a nonelected, there being no allowable generic or linking claim". Applicant objects. Applicant submits that Applicant's amendment filed on January 6, 2006 explicitly elects Group II drawn to claims 39-46. Therefore, claims 39-46 should not be withdrawn.

Title of the Invention

Applicant has amended the Title of the Invention by this amendment to conform to the present divisional claims.

Abstract

Applicant has rewritten the Abstract of the Disclosure by this amendment to reflect the presently pending claims.

Prior Art Rejection of Claims 39-42 under 35 U.S.C. §102

In Paper No. 20060215, the Examiner rejected claims 39-42 under 35 U.S.C. §102 for alleged

anticipation by Chan *et al.* (US 4,716,423). Applicant has the following comments.

To begin with, Applicant submits that the process of making described in Chan is very dissimilar to that of Applicant's claimed process. In Applicant's claimed invention, the resistive heater elements, the electrodes, the barrier walls are sequentially formed on the substrate. Then, the nozzle plate is attached to the top of the barrier walls. This is not at all how the device is made in Chan. In Chan, the barrier layer 26 is formed on the nozzle plate 16 to form a composite structure 28. Separately, the resistive heater elements and the electrode layer are formed on the substrate. Then, the composite structure 28 is attached to the substrate containing the resistive heater elements and the electrodes. In other words, in Applicant's invention, the barrier walls are formed on the substrate structure and then the nozzle plate is attached to the substrate structure containing the barrier walls. In Chan, the barrier walls 26 are formed on the nozzle plate 16 to produce composite structure 28, and then this composite structure 28 is attached to the substrate structure. Therefore, Applicant submits that the process of making in Chan is very dissimilar to that of Applicant's claimed invention. Therefore, the rejection of claim 39 should be withdrawn.

In claim 39, Applicant claims "the barrier walls separating pairs of patterned resistive heater elements". In Paper No. 20060215, the Examiner states that this limitation is taught by Chan. Applicant disagrees. Applicant submits that Chan is devoid of any teaching of a barrier wall that separates pairs of resistive heater elements.

In Paper No. 20060215, the Examiner equates second nickel layer 26 with Applicant's barrier

walls and heater elements 50, 52 with Applicant's resistive heater. However, Paper No. 20060215 is devoid of any explanation as where in Chan is there a teaching of layer 26 separating pairs of heater elements. Instead, FIGS. 2 and 3 of Chan show that nickel layer 26 separates individual resistive heaters from each other, not pairs of resistive heater elements. This is because nickel layer 26 in Chan is shown between each heater element, as is evidenced by FIG. 3 of Chan where layer 26 is between and separates heater element 52 from 50. Applicant submits that there is no teaching in Chan of the heater elements being grouped in pairs as in Applicant's claimed invention. As a result, Applicant submits that the rejection of Applicant's claim 39 is without merit.

In claim 39, Applicant claims, "each nozzle hole being disposed above a portion of the substrate between a pair of resistive heater elements". In Paper No. 20060215, the Examiner states that this is taught by Chan. Applicant disagrees. Applicant submits that Chan is devoid of any teaching of nozzle holes being disposed between a pair of nozzle holes.

In Paper No. 20060215, the Examiner equates exit orifice 32 with Applicant's nozzle holes without positively identifying the nozzle plate of Chan. It is assumed that the Examiner intends that first nickel layer 16 of Chan to correspond to Applicant's nozzle plate. Applicant has reviewed the entire reference to Chan along with the figures of Chan and cannot find a teaching of the nozzle holes being located between a pair of resistive heater elements. In fact, FIGS. 2 and 3 and the specification of Chan clearly show describe the exit orifices 32 directly above each of resistive heater elements 50 and 52 and not between heater elements 50 and 52. This is to the desired contour can be achieved in Chan. Therefore, Applicant submits again that the rejection of claim 39 is without


merit because Chan fails to teach the nozzle holes located between a pair of resistive heater elements.

Newly added claims 47-53

Applicant has newly added claims 47-53 to alternately claim a feature of Applicant's invention that is entirely dissimilar to that of Chan, that Applicant's barrier walls separate pairs of resistive heater elements from each other as opposed to separating individual resistive heater elements from each other. Entry of and favorable examination is respectfully requested.

In view of the above, it is submitted that the claims of this application are in condition for allowance, and early issuance thereof is solicited. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney. No fee is incurred by this Amendment.

Respectfully submitted,



Robert E. Bushnell,
Attorney for the Applicant
Registration No.: 27,774

1522 "K" Street N.W.,
Suite 300
Washington, D.C. 20005
(202) 408-9040

Folio: P57047
Date: 5/22/06
I.D.: REB/ML